IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 8887
Wolfram Andersch *et al.*	Art Unit: 1616
Appl. No.: 10/575,276	Examiner: SULLIVAN, Danielle D
371(c) Date: April 11, 2006	Atty. Docket: 2400.0270000/RWE/L-Z
For: **Synergistic Insecticide Mixtures**	

Declaration Under 37 C.F.R. §1.132

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

I, Wolfram Andersch of 51469 Bergisch Gladback, Schlodderdicher Weg 77, a citizen of Germany, hereby declare:

1. that I received the doctor's degree in biology from the University of Göttingen, Germany, in 1983;

2. that I am now an employee of Bayer CropScience AG[1] in Germany as a biologist;

3. that I have specialized in the field of plant protection; and

4. that the following tests have been carried out under my supervision and control.

5. The expected efficacy of a given combination of two compounds is calculated as follows (see Colby, S.R., "Calculating Synergistic and Antagonistic Responses of Herbicide Combinations," Weeds 15, pp. 20-22, 1967):

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[1] Bayer CropScience AG is the assignee of the above-captioned application.

If

X is the efficacy expressed in % mortality of the untreated control for test compound A at a concentration of m ppm,

Y is the efficacy expressed in % mortality of the untreated control for test compound B at a concentration of n ppm,

E is the efficacy expressed in % mortality of the untreated control using the mixture of A and B at m and n ppm,

$$E = X + Y - \frac{X \bullet Y}{100}$$

6. If the observed insecticidal efficacy of the combination is higher than the one calculated as "E," then the combination of the two compounds is more than additive, *i.e.*, there is a synergistic effect.

Example A

7. ***Plutella xylostella* - test**

Solvent: 7 parts by weight of dimethylformamide

Emulsifier: 2 parts by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration. Cabbage leaves (Brassica oleracea) are treated by being sprayed with the preparation of the active compound in the desired concentration and are infested with larvae of the diamond back moth (*Plutella xylostella*) as long as the leaves are still moist. After the specified period of time, the mortality in % is determined. 100 % means that all the caterpillars have been killed; 0 % means that none of the caterpillars have been killed. In this test, the following combinations at different mixing ratios demonstrate synergistic effects as shown in Tables A1 and A2.

8. Table A1: *Plutella xylostella* – Test

Active Ingredient	**Concentration (ppm)**	**Mortality (% after 1 day)**
Imidacloprid	80 40 20 10 5	0 0 0 0 0
Clothianidin	160 80 40 20	60 35 25 15
Imidacloprid + Clothianidin (4 : 1) According to the invention	**80 + 20**	**obs.* cal.**** **40 15**
Imidacloprid + Clothianidin (2 : 1) According to the invention	**80 + 40**	**obs.* cal.**** **75 25**
Imidacloprid + Clothianidin (1 : 2) According to the invention	**80 + 160** **40 + 80** **20 + 40**	**obs.* cal.**** **90 60** **60 35** **50 25**
Imidacloprid + Clothianidin (1 : 4) According to the invention	**40 + 160** **20 + 80** **10 + 40**	**obs.* cal.**** **90 60** **65 35** **50 25**
Imidacloprid + Clothianidin (1 : 8) According to the invention	**10 + 80**	**obs.* cal.**** **75 35**

* obs. = observed insecticidal efficacy

** cal. = efficacy calculated with Colby-formula

9. Table A2: *Plutella xylostella* – Test

Active Ingredient	**Concentration (ppm)**	**Mortality (% after 2 days)**
Imidacloprid	40 20	35 20
Clothianidin	20 5	55 0
Imidacloprid + Clothianidin (8 : 1) According to the invention	**40 + 5**	**obs.* cal.**** **50 35**
Imidacloprid + Clothianidin (4 : 1) According to the invention	**20 + 5**	**obs.* cal.**** **35 20**
Imidacloprid + Clothianidin (2 : 1) According to the invention	**40 + 20**	**obs.* cal.**** **85 70.75**

* obs. = observed insecticidal efficacy

** cal. = efficacy calculated with Colby-formula

10. The undersigned declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Monheim, Germany,

17.09.2009
Date

Dr. Wolfram Andersch